

Amendments to the Claims

Please amend the claims as shown below.

1. (Withdrawn) A financial management system, comprising:
 - a first data structure to store data representing a reference budget,
 - a second data structure to store data representing a working budget,
 - a rule array to store rules, each rule having an address field, a test field defining relationships between values of the reference budget and the working budget, and a response field.
2. (Withdrawn) The financial management system of claim 1, wherein the address field comprises:
 - a first address pointer addressing nodes of the working budget database, and
 - a second address pointer addressing nodes of the reference budget database.
3. (Withdrawn) The financial management system of claim 1, wherein the address field comprises a single address pointer referencing nodes of both the working budget database and the reference budget database.
4. (Withdrawn) The financial management system of claim 1, wherein the rule array includes a rule to be applied recursively to several sets of nodes from the working budget database and the reference budget database.
5. (Currently Amended) A method of performing budgetary consistency checks between a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area in a computer system, comprising:
 - iteratively receiving a budget item, at the computer system, for entry into the working budget database, wherein the budget item is represented by a value;
 - executing, by a rules manager, one or more rules stored in a rules array data structure, the rules including pointers to entries within the working budget database in the first data storage area and entries within the reference budget database in the second data storage area, a definition of a test relationship between the entries pointed to in the working

budget and the entries pointed to in the reference budget and a definition of a response that is a function of the test relationship,

~~performing on the computer system an aggregation of the value of the received budget item with an entry of the working budget database to obtain an aggregated value of the entry in the working budget database;~~

determining the result of the test relationship between the entry from the working budget database in the first storage area and the entry from the entry from the reference budget database pointed to in the rule, and outputting a response defined by the response definition;

if any rule generates an error response according to the response definition, blocking the budget item from being saved to the working budget database; and
otherwise, saving the received budget item in the working budget database.

6. (Original) This method of claim 5, further comprising, pursuant to execution of a rule, performing aggregation of addressed entries of the working database according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.

7. (Original) The method of claim 5, further comprising pursuant to execution of a rule, performing aggregation of addressed entries of the reference database, according to a definition provided in the rule, an aggregate value obtained therefrom being used to determine if the test relationship is satisfied.

8. (Original) The method of claim 5, further comprising, if any rule generates a warning, posting an alert as specified in the response definition of the corresponding rule.

9. (Original) The method of claim 5, further comprising:

identifying elements within the working budget database that are to be changed by the new budget item, and

identifying rules for which the identified elements are operands,

wherein the executing causes only the identified rules to be executed.

10. (Withdrawn) A rule array for a budgetary check system, comprising a plurality of rules, each rule comprising:

an address field identifying locations from a first and second budget database from which budget value information is to be obtained,

a test field to store a definition of a relationship that must be met between values from the first data structure and values from the second data structure to satisfy the rule, and

a response field to store a definition of an action to occur if the relationship is not satisfied.

11. (Withdrawn)The rule array of claim 10, wherein the address field comprises:

a first address pointer addressing nodes of the first budget database, and

a second address pointer addressing nodes of the reference budget database.

12. (Withdrawn)The rule array of claim 10, wherein the address field comprises a single address pointer referencing nodes of both the first and second budget database.

13. (Withdrawn)The rule array of claim 10, wherein at least one rule contains an indication that it is to be applied recursively across a plurality of sets of locations of the first and second budget database, and the address field identifies the sets of locations.

14. (Withdrawn)The rule array of claim 10, at least one rule further comprising a field for definition of an aggregation rule to be applied to the locations specified in the respective address field.

15. (Currently Amended) A computer readable medium in which are stored program instructions that when executed, cause a financial management system to:

receive, at the financial management system comprising a hierarchical working budget database in a first data storage area and a hierarchical reference budget database in a second data storage area, a budget item for entry into the working budget database, wherein the budget item is represented by a value;

execute, by a rules manager, one or more rules stored in a rules array data structure stored separately from the working budget database and the reference budget database, the

rules including pointers to entries within the hierarchy of the working budget database and entries within the hierarchy of the reference budget database, a definition of a test relationship ~~that~~ between the entries in the working budget and the entries in the reference budget and a definition of a response that is a function of the test relationship,

~~performing on the computer system an aggregation of the value of the received budget item with an entry of the working budget database to obtain an aggregated value of the entry in the working budget database;~~

determining the output of the test relationship ~~and by comparing value of the budget item pointed to in the working budget database in the first storage area and the value of the entry pointed to in the reference budget data, and outputting the output to a response according to~~ the response definition;

if any rule generates an error response according to the response definition, block the budget item from the working budget database; and

otherwise, update the working budget database with received budget item.

16. (Previously Presented) The computer readable medium of claim 15, wherein the program instructions further cause the financial management system, if any rule generates a warning, to post an alert as specified in the response definition of the corresponding rule.

17. (Previously Presented) The computer readable medium of claim 15, wherein the program instructions further cause the financial management system to:

identify elements within the working budget database that are to be changed by the new budget item, and

identify rules for which the identified elements are operands, and
execute only the identified rules.

18. (Previously Presented) The method of claim 5, wherein the executing comprises:

identifying, by using an address field containing address pointers, locations from a first and second budget database from which budget value information is to be obtained,

storing in a test field a definition of a relationship that must be met between values from the first data structure and values from the second data structure to satisfy the rule, and

storing in a response field a definition of an action to occur if the relationship is not satisfied.

19. (Previously Presented) The method of claim 18, the identifying comprises:
addressing nodes of the first budget database using a first address pointer, and
addressing nodes of the reference budget database using a second address pointer.
20. (Previously Presented) The method of claim 18, the identifying comprises:
referencing nodes of both the first and second budget database using separate address pointers contained in the address field.
21. (Previously Presented) The method of claim 18, the executing comprises:
entering an indication, contained in at least one rule, recursively across a plurality of sets of locations of the first and second budget database, and the address field identifies the sets of locations.
22. (Previously Presented) The method of claim 18, the executing comprises:
accessing a field for definition of an aggregation rule contained in at least one rule to the locations specified in the respective address field.
23. (Currently Amended) A financial management system, comprising:
a working budget hierarchical database storage device storing a working budget database having an amendable budget items, wherein the budget items are represented by a value;
a reference budget hierarchical database storage device, separate from the working budget database storage device, storing reference budget database having reference budget items in a hierarchy, the reference budget items having a value and corresponding to the budget items of the working budget stored in the working budget database;
a terminal for receiving a budget item for entry into ~~[[a]]~~the working budget database;
~~wherein the budget item is represented by a value;~~
a rules array data structure, separate from the working budget hierarchical database and the reference budget hierarchical database, storing a plurality of rules, the rules including

pointers to entries within the hierarchy of the working budget hierarchical database and entries reference budget items within ~~[[a]]~~the hierarchy of the reference budget hierarchical database, a definition of a test relationship that between the entries in the working budget and the entries in the reference budget and a definition of a response that is a function of the test relationship;

a processor executing one or more of the plurality of rules stored in the rules array, ~~performing an aggregation of the value of the received budget item with an entry of the working budget database to obtain an aggregated value of the entry in the working budget database, and determining the output of the test relationship and comparing the output to the response definition;~~ and

a display connected to the terminal and the processor for indicating that the received budget item is blocked from being saved to the working budget database if any rule generates an error response according to a response definition in the executed rule.

24. (New) The system of claim 23, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, a pointer to the entry in the reference budget database points to all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

25. (New) The method of claim 5, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, a pointer to the entry in the reference budget database points to all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

26. (New) The computer readable medium of claim 15, wherein the hierarchy of the reference budget hierarchical database comprises a plurality of nodes at different levels in the hierarchy, and, in at least one of the rules, a pointer to the entry in the reference budget database points to all of the nodes in at least one of the different levels, and a single rule applies to all entries at that level.

27. (New) The system of claim 23, wherein the pointers to the entries in the working budget database to retrieve working budget values are also applied to the reference budget database to retrieve reference budget values for application of a rule.

28. (New) The method of claim 5, wherein the pointers to the entries in the working budget database to retrieve working budget values are also applied to the reference budget database to retrieve reference budget values for application of a rule.

29. (New) The computer readable medium of claim 15, wherein the pointers to the entries in the working budget database to retrieve working budget values are also applied to the reference budget database to retrieve reference budget values for application of a rule.